

Affective Responses in the Purchase of Consumer Eco Products

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This study aims to investigate the affective attachment of consumers to ecological products. It also aims to determine the type of emotions elicited by these kinds of consumer products. It was hypothesized that buying eco products can elicit different kinds of emotions in consumers. These emotions are usually positive that cause attraction to consumers and eventually the actual purchase of the product. An exploratory pre-purchase affect survey was conducted through field and online survey to determine what shoppers feel while looking for eco products to buy. Results revealed that participants significantly experience more positive feelings/emotions than negative feelings/emotions when buying eco-products while participants are indifferent in experiencing positive and negative feelings/emotions when buying non-eco products. This study provided information on the importance of incorporating ecological attributes to the design of consumer products. As of now, not all companies offer eco-friendly products because it is not known if consumers are willing to pay more for the “environment friendly” attribute. This study hopes to shift the paradigm of companies as it will try to establish the emotional attachment of consumers to product attributes related to the environment.

JEL Classifications: D12, M31, M37, Q56

Keywords: eco-label, affective design, ecological products

Green products are increasingly attractive in today’s marketplace (Juwaheer, Pudaruth, & Noyaux, 2012). The industry was estimated at over \$200 billion in 2006 (Gupta & Ogden, 2009). There is an improvement in the environmental awareness of consumers, which results in the increased demand for green products—an observation that a number of companies have taken advantage of by offering green products and services (Chan, 1999; Ottman, 1992; Peattie & Ratnayaka, 1992; Salzman, 1991; Vandermerwe & Oliff, 1990). A drastic change in consumer

preferences towards green products can be seen in the last decade with the emergence of green consumers provoking market method for environmentally friendly organizations and new product innovations (Ottman, 1993). Ecologically friendly products intend to decrease the negative impacts on the environment and provide considerable enhancements during the life cycle of the product (Hindle, White, & Minion, 1993; Pujari & Wright, 1996; Shrivastava, 1995).

Eco products can elicit different kinds of emotional responses. These are generally

positive responses making people attracted to these products and buy them (Schiffstein & Desmet, 2010). Consumers have an impression that buying eco products help them save the environment. Such an impression elicits feelings of altruism and concern that prompts them to make a purchase. Manufacturers, therefore, make an effort to put information related to environment friendliness in their labels for consumers to notice. Many consumers are willing to make an effort to reduce the negative environmental impact of their consumption. Acting in an altruistic way is linked with a feeling of well-being (Ritov & Kahnemann, 1997). Consumers experience personal satisfaction by contributing to the betterment of the environment. This is especially true for people who have experienced losses due to disasters brought about by environmental degradation. Memories brought about by these events trigger strong emotions that prompt consumers to consider the purchase of environment-friendly products even though the price is higher than the alternatives.

The importance of emotion in the purchase process was highlighted by Schiffman et al. (2001). They enumerated four models that guide people in making decisions, namely: (1) economic man model, (2) passive man model, (3) cognitive man model, and (4) emotional man model. In the emotional man model of consumer decision-making, the basis is emotion. Decision is based on strong experiences of joy, fear, love, hope, and so forth. Products are bought because consumers felt positive emotions that led them to be attached to the product. Emotions can be brought about by the environment (Bitner, 1992; Milliman, 1982), the salesperson (Bell, 1999), advertising (Batra & Stayman, 1990), and the product itself (Richins, 1997).

Studies have been done to identify emotional responses in the purchase context. One of the earlier studies on emotion identification and modelling was conducted by Russell (1980). He proposed that affective measurements are

not independent but are related in a systematic style. He based his theory on the previous work of Schlosberg (1952) who hypothesized that emotions were arranged in a circular manner. The circumplex model of affect proposed by Russell (1980), however, may not be relevant in all emotion studies especially in the context of evaluating an eco-product during the pre-purchase stage. While a consumer examines an eco-product, the feelings of sleepiness or distress may not be applicable. People will not be attracted to the product if it will distress or make them sleepy.

Similarly, Richins (1997) developed the Consumption Emotion Set (CES) which was gathered from the analysis of three consumption situations including automobile, recreational, and sentimental products. There were 17 emotions generated such as anger, discontent, worry, sadness, fear, shame, envy, loneliness, romantic love, love, peacefulness, contentment, optimism, joy, excitement, and surprise. However, the study focused on consumption experience and not on the pre-purchase context which is the concern of this study. Moreover, the study did not consider eco-products. Emotion measurement is relevant in designing eco-products as it will determine how product attributes are relevant in generating emotion and purchasing decisions.

LITERATURE REVIEW

Affect Definition

There are several meanings and classes of affect and pleasure in marketing, product design, and psychology (Khalid & Helander, 2004). Affect or affective reaction is an encompassing word that includes feelings, emotions, moods, and evaluations (Simon, 1982). On the other hand, Khalid (2006) defined affect as “an intensive and relatively short-lasting emotional state” (p. 412). Core affect was defined by Russell (2003) as a

neurophysiological state that one consciously access as a basic feeling that is not obviously expressed. Stone (1995) used the terms mood and affect interchangeably in his study of affective response measurement.

Pleasure is closely associated with affect. The framework that classifies different kinds of pleasures with products was proposed by Tiger (1992 as cited in Jordan, 2002). The four pleasures are physio-pleasure, socio-pleasure, psycho-pleasure, and ideo-pleasure. Physio-pleasure is associated with people's senses. When interacting with a product, physio-pleasure can be the tactile and olfactory senses like when you touch a dress that is soft or the smell of leather shoes while shopping. Socio-pleasure on the other hand, is the status or social belonging that the product provides like a luxury car. Psycho-pleasure refers to the cognitive and emotional reactions derived from using a smart phone. The user should be able to understand the interface and provides a good feeling. Lastly, ideo-pleasure relates to people's values like a product that is made from biodegradable materials that convey the value of caring for the environment. Jordan (2002) defined pleasure with product as the process of deriving emotional and practical benefits from it. It is the interaction of people and product and the benefits it derived while using it. Seligman and Csikzentmihalyi (2000) also defined pleasure as a good feeling coming from satisfaction of homeostatic needs like hunger, sex, and bodily comfort. On the other hand, Coelho and Dahlman (2000) defined displeasure as the emotional and hedonic penalties associated with product use. It is very evident that in order to understand pleasure, we must seek to define displeasure.

Feeling on the other hand is a part of affect and is defined as a response that may be positive or negative as a result of an experience of something that affects the function of the human body (Arnold, 1960). It is sometimes thought of as causing emotion or a subset of emotion. Solomon

(2000) stressed that feeling is not enough to generate emotion, which suggests that it is of lesser intensity and does not trigger action. The topic of feeling is not well documented in the affect literature as many academicians think that feelings are sometimes indescribable and cannot be measured.

Similarly, emotion is also a subject that is hard to define. According to Forgas (2001), emotion has a defined cause, is intense, and fleeting. However, Frederickson (1998) and Khalid (2006) defined emotions as deliberate and can remain in memory for one or several days. Frederickson (1998) in his research showed that positive emotions such as joy, interest, contentment, and love as a pleasant subjective feeling as compared to negative emotions. This is because positive emotions are few in number and rather dispersed. Some researchers defined emotion by enumerating its different types (Izard, 1977; Plutchik, 1980) while others concentrated on the level of arousal (Russel, 1980). Plutchik (1980) reviewed 28 definitions of emotion. He said that many of them were not sufficiently categorized to give a clear idea of what emotion actually is. Ortony, Clore, and Foss (1987) and Ortony, Clore, and Collins (1988) proposed a framework in their attempt to enhance understanding of emotions by specifying their characteristics. According to them "an emotion is a valenced affective reaction to perceptions of situations. They exclude from the field of emotion those descriptors that refer to non-valenced cognitions such as interest and surprise and bodily states such as sleepy and droopy and lastly subjective evaluation of people such as self-confident or feeling abandoned" (Ortony, Clore, & Foss, 1987, p. 752).

Moods are differentiated from emotion and are described as "low intensity, diffuse and enduring affective states that have no salient antecedent cause and therefore little cognitive content" (Forgas, 2001, p. 412). It is characterized as general, universal, and not directed at specific

targets as described by O'Shaugnessy (2003). Some examples of moods are sadness and happiness.

Lastly, evaluation is a kind of affect that classifies positive and negative reactions (Simon, 1982). It is the aspect of affect that is used to assess a situation or a product if it is attractive, pleasurable, or disgusting. In this study, it is hypothesized that there are intense positive emotion that will be derived from inspection of consumer-based eco products that can influence purchase intention. When a customer experiences intense positive emotion, favorable response will result such as increasing the chance of buying the product. A strong positive emotion will directly influence purchase decisions.

In the review of literature presented, no studies have considered the ecological attributes of a product as a source of affect. This is the focus of this study. It is important to understand how the ecological attributes can affect the moods and feelings of consumers.

Emotions and Their Measurement

Some researchers have tried to measure emotions and classified a set of basic emotions. Plutchik (1980) came up with eight "primary" emotions: fear, anger, joy, sadness, acceptance, disgust, expectancy, and surprise. These eight emotions have been adopted in the struggle for survival in the animal kingdom. Plutchik and Kellerman (1974) developed the Emotions Profile Index that consists of 62 forced choice emotion descriptor pairs and the responses were then translated into the eight emotion scales. Similarly, Holbrook and Westwood (1989) modified Plutchik's emotions and their scale contains three adjectives for each emotion and responses to determine its intensity for each of the adjectives.

Izard (1977) on the other hand used facial muscles to examine emotions. He discovered 10 fundamental emotions which consist of interest,

enjoyment, surprise, distress/ sadness, anger, disgust, contempt, fear, shame/shyness, and guilt. He proposed the Differential Emotions Scale (DES) that has its roots in the study of the animal kingdom behavior. Darwin in particular believed that emotions are a living thing's way of improving survival (Izard, 1977). Similarly, the DES-II has been widely used in consumption emotion research. It includes 30 adjective elements to measure each of Izard's 10 basic emotions.

The reliability of facial expression to gauge emotion has been proven by the study of Tomkins and Carter (1964). Their study revealed that observers are in agreement on the interpretation of emotion through facial expressions.

Cross cultural studies proposed that there is universality in interpreting emotion in facial expression (Keltner & Ekman, 2004). Their studies were able to disprove the theory that there are cultural differences in facial expressions. Furthermore, Ekman and Friesen (1978) were able to come up with a way of classifying facial expression from the movement of facial muscles. The assessment of facial muscles is quite difficult to understand and only a few people are knowledgeable in it.

The basic emotions that were identified through facial expression studies revealed a list of emotions that scholars can use to identify what the participants feel in emotion researches. It is possible that a person can experience different emotions at the same time at different intensities. However, there are some emotions that consumers will not feel when they see a product, such as anger and contempt. There is a need to classify the feelings if there is a mixture of emotions. There are also some emotions that can be felt but are not observable or seen in the facial expressions.

Both Plutchik (1980) and Izard (1977) insisted that more complex emotions are the result of the mixtures of their basic emotions. However, Ortony and Turner (1990) challenged the basic

emotions proposed by these authors and believed that the notion of basic emotion cannot be explained theoretically or empirically. Therefore, there is a question on the reliability and validity of measures of basic emotions proposed by these authors.

Mehrabian and Russell (1974) developed the PAD or the pleasure arousal dominance scale, which has been used by marketing researchers to assess emotional responses to some types of marketing stimuli. The PAD scale was developed to measure emotional responses to environmental stimuli such as architectural spaces. However, it does not intentionally measure emotion but instead assessed the behavioral responses of pleasure, arousal, and dominance produced by a set of environmental stimuli. Therefore, it is used when a scholar is interested in measuring the dimensions causing the emotion states and does not need to know the specific emotions being experienced by study respondents.

In measuring emotion in the pre-purchase context, there is a need to use a certain set of emotions that are relevant. Richins (1997) came up with the CES from consumption of automobile, recreational, and sentimental products while Westbrook (1987) observed the experience of joy when evaluating a vehicle. However, this emotion set was made considering all aspects of consumption from anticipation to actual use of the product. A survey was conducted by Seva, Duh, and Helander (2010) on the pre-purchase affect on clothing, electronic products, and watches of Singaporeans aged 18-28 years old. The study produced the pre-purchase emotion set (PES) with 18 emotions. These 18 emotions are: amazed, cheerful, concerned, contented, delighted, encouraged, enthusiastic, excited, fulfilled, glad, good, happy, hopeful, interested, joyful, pleased, surprise, and thrilled. Emotion sets generated by previous studies were too broad and have a wide context of application to be readily applied in the current study of eco products. It is hypothesized that purchasing

eco-products will generate a unique emotion set that is more appropriate in affect measurement in environmental studies. Determining a unique set of affective responses to consumer eco products in the pre-purchase stage is crucial in the eventual measurement of the influence of product attributes to the purchasing of eco products.

Stages of Affect in Consumption

In understanding the sources of affect in consumption, it is important to divide the situation into pre-purchase and post-purchase stages. The pre-purchase stage refers to the time when the consumer is evaluating or looking for a product to buy which have been decided beforehand. An example of which is when you plan to buy a cellphone you may or may know the brand and specifications that you want to buy. It is also possible that you are just window shopping and may want to explore the latest gadget on sale. Both scenarios provide an opportunity for shoppers to buy. Aside from price, another important factor that will make them decide to buy is affect which is acknowledged to motivate people and shop owners are interested to know how it influences them to buy (Westbrook, 1987).

Post purchase stage includes the time when the consumer has already bought and used the product. At this stage affect is triggered by the experience of satisfaction. Satisfaction is a broad concept that can be defined by emotions of joy and pleasure whereas dissatisfaction is related to feelings of disgust, anger, and disappointment.

Eco-Labels

An eco-label is a declaration by a company that it has engaged in ecologically sensitive production or distribution process. These claims often appear on the labels fixed to products. The label is intended to provide information to customers about the procedure the company has taken to protect the environment. If customers

value these claims then they are willing to pay a premium price for these products and thus create a market for environmental protection (Bruce & Laroiya, 2007). Environmental labels act as an influence for customers to choose products that are environmentally friendly. It is used by companies to distinguish their products and communicate the environmentally friendly message (D'Souza, 2000). There are a number of ways by which marketing people communicate these environmental benefits of product through general or specific product claims on labels like "eco-friendly", "environmentally safe", "recyclable", "biodegradable" and "ozone friendly" (Morris, Hastak, & Mazis, 1995). According to the study of D'Souza, Taghian, and Lamb (2006), ecological label is an important way of attaining and communicating environmental validations of products to the customers since a relatively large number of consumers always read labels and considers the information provided to be accurate. The label only shows that the respective product is ecologically preferable compared to alternative product in the same product group. There are several international, national, and regional eco-label schemes such as the European Flower, the Nordic Swan, or the German Blue Angel (Klaschka, Liebig, & Knacker, 2007).

There are numerous studies showing that many customers are willing to pay a premium for eco-labeled products (Gumpper, 2000; Imkamp, 2000; Loureiro, McCluskey, & Mittelhammer, 2002; Makatouni, 2002; Moon, Florkowski, Bruckner, & Schonhof, 2002). Consumers, however, may perceive that green products are more expensive compared to traditional products. The result of the study of D'Souza et al. (2006) revealed that majority of respondents (69.7%) indicated that they would purchase environmentally safe products even if they cost more than the alternative products.

Uncertainty still remains with respect to how labels influence customers. D'Souza et al. (2006)

investigated how customers who differ in terms of environmentalism respond to labels. A total of 155 survey questionnaires were collected and analysed using both descriptive and correlation between variables. The selected samples were 35-54 years old and majority are female (79%) and married (65%). There is a large percentage (67.7%) of respondents indicating that they always read product labels and 55.4% reported satisfaction with the information provided therein. It is suggested that providing satisfactory product label will result in more informed customer decisions and product selection. However, there appears to be a proportion of customers that find product labels difficult to understand. The difficulty in reading labels maybe brought about by terminology used in the text, the layout of the label, or even its size, legibility, and so forth. The study also found that customers will buy green products even if they are lower in quality in comparison to alternative products but would investigate for environmental information on labels. The results also showed a relationship between price sensitivity and "always" reading labels as well as showing that there is "sufficient" information on product labels to make informed purchase decisions. The study proposes that businesses need to provide clear, truthful, and easily understandable label design to urge satisfaction with the accuracy of content and the communication aspects of a label.

Knowing a label is a precondition in decision making and understanding it is a prerequisite for using it correctly. Understanding a label suggests that the person knows it exists, what it looks like, and what it means. Recognizing a label is not the same as understanding its exact meaning. Morris et al. (1995) found that only 5% of a representative sample of US consumers exhibited a full understanding of the terms "recycled" and "recyclable". Thogersen (2000) proposed a model for consumer attention towards eco-label and the motivation-attention part of the model was tested by means of data from different

European countries included in the study. Due to lack of data, the importance of the availability of eco-labelled products in the shops and of the customers' ability to recognize and understand them was not included in the test. A large majority of the consumers in all the countries tested pays attention to eco-labels at least sometimes. Paying attention to eco-labels is strongly influenced by the belief in considerate buying as a means of protecting the environment and by the trust in the labels included in the study. This study supports that consumers pay attention to and use labels in their buying decisions only if they trust them. Also, the study shows that consumer belief in responsible purchase behavior as a means of achieving environmental goals depends partly on pro-environmental attitude and partly on personality traits or perceived effectiveness.

Similarly, the study of Delmas, Nairn-Birch, and Balzarova (2013) proposed a framework that evaluates eco-labels along three aspects: consumer understanding and awareness, consumer confidence, and willingness to pay. In consumer awareness and understanding, the following guidelines should be followed: choose eco-labels with simple and clear messages to customers, choose labels that assign resources to communication of their label, favor multiproduct labels, and favor labels with approvals from the government and large retailers. For consumer confidence, the following criteria are: prefer eco-label organizations with multiple partners, check the integrity of the partners, avoid conflicts of interest, choose transparent eco-label organizations, conduct your own product environmental evaluation, and ensure supply-chain availability. Lastly for willingness to pay aspect, the following conditions are: emphasize increased quality, emphasize health benefits, and leverage peer pressure. By using these frameworks, managers can avoid gambling on the wrong label.

The studies presented indicate that more investigation need to be done to maximize the

existing and growing consumers' education with respect to communicating important environmental safety messages of green product features to consumers. In order to achieve successful communication of product features, adequate and useful information needs to be provided on product labels. Companies should not overlook the significance of eco-labelling since it acts as a powerful means of achieving and maintaining green product standing and creating an effective competitive advantage. Green product labels can be used for positioning the product's influence and as product differentiator.

The review conducted showed that eco product attributes that influence emotion had not yet been tackled in previous studies. Moreover, the emotions involved in the pre-purchase context of eco-products have not yet been determined. The present study aims to determine the respondents' awareness and understanding of eco-friendly products and know consumers' reasons for buying these products and identify the kinds of emotions these products elicit.

RESEARCH METHOD

To test the hypothesis that there is a distinct set of emotion generated by consumer for eco products in the pre-purchase stage, an exploratory survey of pre-purchase affect was constructed.

Questionnaire Development

In order to ensure the understandability of the questionnaire, it was pre-tested among potential respondents. The survey was divided into several parts as discussed below.

In order to aid the memory of the participants as to the emotions they felt, they were provided a comprehensive list of emotions from Richins' (1997) CES. Moreover, they were also asked for specific emotions they have experienced that are not on the list. It is expected that a smaller

Part	Description
Demographic profile of the sample	Respondents' age, gender, and information on occupation was also included to know the composition of the sample such as student, professional, or housewife.
Understanding and knowledge of eco products	Understanding of eco products (such as any product which reduces impact on the environment, better products for everyone especially mother nature, not harmful to the environment, products made from recycled materials and organic ingredients with toxic pesticides or herbicides, sustainable production and reduction of energy consumption and transport, healthy and good for people, animals and the environment, and smallest possible footprint on the planet), reasons for going to an eco-store, how they learn about eco products, their frequency of buying these products, and their intention in buying them
Affective Experience	emotions/feelings they experience when they buy an eco-product

number of emotions will be relevant in this particular context.

Field Survey

Using the questionnaire developed, a survey was conducted in a store that offers eco-friendly products. The popular store that offers these kinds of product is the ECHOstore Sustainable Lifestyle. It is the first concept store in the Philippines. ECHO stands for Environment & Community Hope Organization. They offer Filipino products that represent the ideals of health, fair trade, and care for the environment. It is assumed that customers specifically go to this store to buy eco-friendly products. Purposive sampling was used to identify subjects for the field survey. This kind of sampling is used if there is a particular set of criteria required for participants to qualify in the survey. In this study, these participants were customers of a store that sells environment-friendly products. People who enter the store are assumed to be environmentally conscious. These customers were surveyed to determine their reasons for purchasing eco products and identify the emotions these products

elicit. Participants in the field survey are those that enter the eco store to either look or buy eco products.

Online Survey

The same questionnaire was also used to gather more data from an online survey from people who do not patronize eco products. Since the field survey had targeted those who intentionally buy eco products, the online survey ensured that the view of a different kind of market segment is represented.

Participants in the online survey may have diverse characteristics. Since the objective of the survey is to determine the reasons for buying or not buying an eco-product, anyone with the capability to buy is qualified to join.

Measures

The results of the survey included a list of emotions experienced when buying eco and non-eco products. It is expected that the number of emotions generated will be more than 20 so only frequently cited emotions were further analyzed.

Pareto analysis was used to identify the critical emotions in the list.

RESULTS

A total of 96 participants were gathered to answer the exploratory survey of pre-purchase affect. Specifically, 85% (n = 82) of the total participants answered the online survey and the remaining 14% (n = 14) answered the hard copy survey in a selected eco store.

Understanding and Awareness of Eco Product

The results of the survey revealed that a total of 87.80% of the respondents buy eco product while 12.20% have not bought any eco-product in the past because it is more expensive than alternative products. Majority of respondents (92%) go to the store because it is the only store that sells eco-product. When asked about their understanding of eco products, respondents believed in the following attributes: they are not harmful to the environment (17.91%), they are made from recycled material and

organic ingredients without toxic pesticides and herbicides (17.66%), it is healthy for people, animal, and the environment (16.92%), address recycling, sustainable production, and reduction of energy consumption and transport (16.67%), and it reduces the impact to the environment (16.42%).

Products Bought from an Eco Store

Participants were asked about product/s they bought from eco stores and the results revealed that there were six eco products that are frequently being bought such as: (a) Shampoo, (b) Soap, (c) Facial wash, (d) Body lotion, (e) Conditioner, and (f) Deodorant. Pareto analysis was conducted and these six products comprise 80% of the responses as shown in Figure 1. The x-axis represents the products bought and the y-axis indicates the frequency.

Emotions/Feelings Experienced in Buying an Eco Product and Non-Eco Product

A total of 62 feeling/emotion statements were presented to the participants, which they used to indicate feelings or emotions experienced when

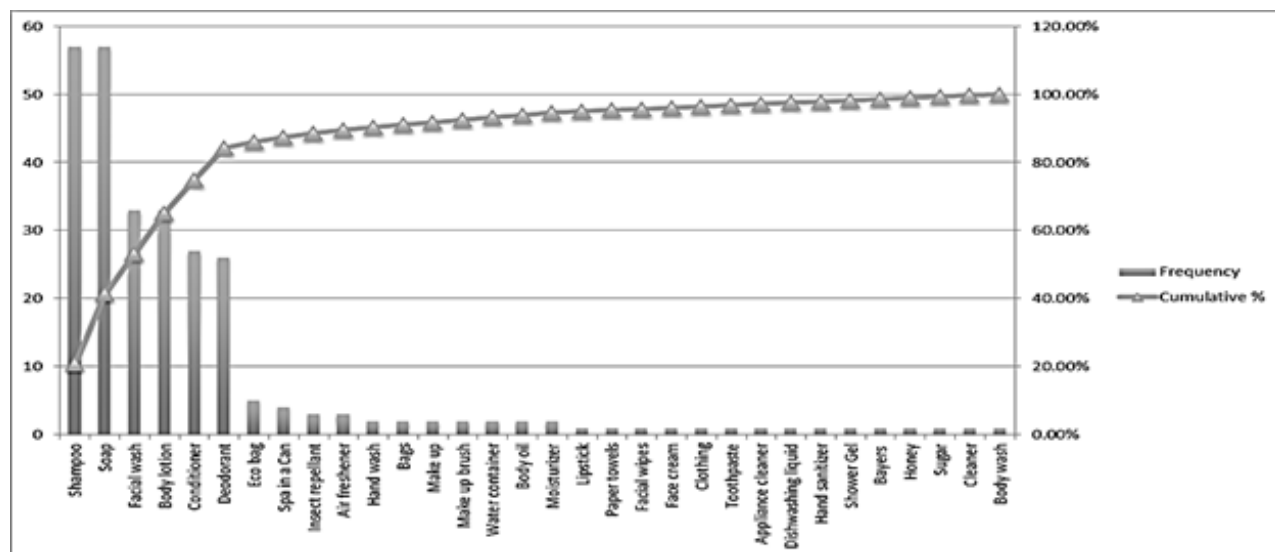


Figure 1. Pareto analysis of products bought from eco store

buying an eco-product and non-eco product. Out of the 62 feeling/emotion statements, 30 denote positive feelings/emotions while 29 denote negative feelings/emotions. Three emotions can be considered unvalenced because they are neither negative nor positive such as jealous. Descriptive statistics are shown in Table 1.

The results suggest that majority of the participants experience more positive feelings/emotions in buying eco products. The mean number of respondents that experienced positive emotion is 21.44 as compared to non-eco products with a mean frequency of 5.38. In contrary, participants experience more negative

feelings/emotions when buying non-eco product with a mean frequency of 5.30 negative emotions than eco product with a mean of 1.30 based on the average responses.

Subsequently, a Pareto analysis was conducted to determine whether the two sets of feelings/emotions differ within each category (i.e., eco product and non-eco product). Figure 2 shows that there were 18 feeling/emotion statements that comprise the 80% of the responses when buying eco products and all statements denote positive feelings/emotions. The list of the 18 feeling/emotion statements that were included in the top 80% is shown in Table 2.

Table 1. *Descriptive Statistics*

	Eco Product		Non-Eco Product	
	Ave	Std. Dev	Ave	Std. Dev
Positive Feelings/Emotions	21.44	14.10	5.38	6.10
Negative Feelings/Emotions	1.30	1.51	5.30	4.43

Table 2. *List of Top 18 Emotions in Buying an Eco Product*

Statements	Frequency	Cumulative Frequency	Cumulative %
Good	49	49	7.47%
Happy	49	98	14.94%
Optimistic	49	147	22.41%
Glad	34	181	27.59%
Pleased	34	215	32.77%
Hopeful	33	248	37.80%
Encourage	31	279	42.53%
Amazed	29	308	46.95%
Calm	29	337	51.37%
Caring	25	362	55.18%
Concerned	25	387	58.99%
Excited	25	412	62.80%
Delighted	24	436	66.46%
Contented	22	458	69.82%
Peaceful	21	479	73.02%
Enthusiastic	20	499	76.07%
Fulfilled	20	519	79.12%
Compassionate	17	536	81.71%

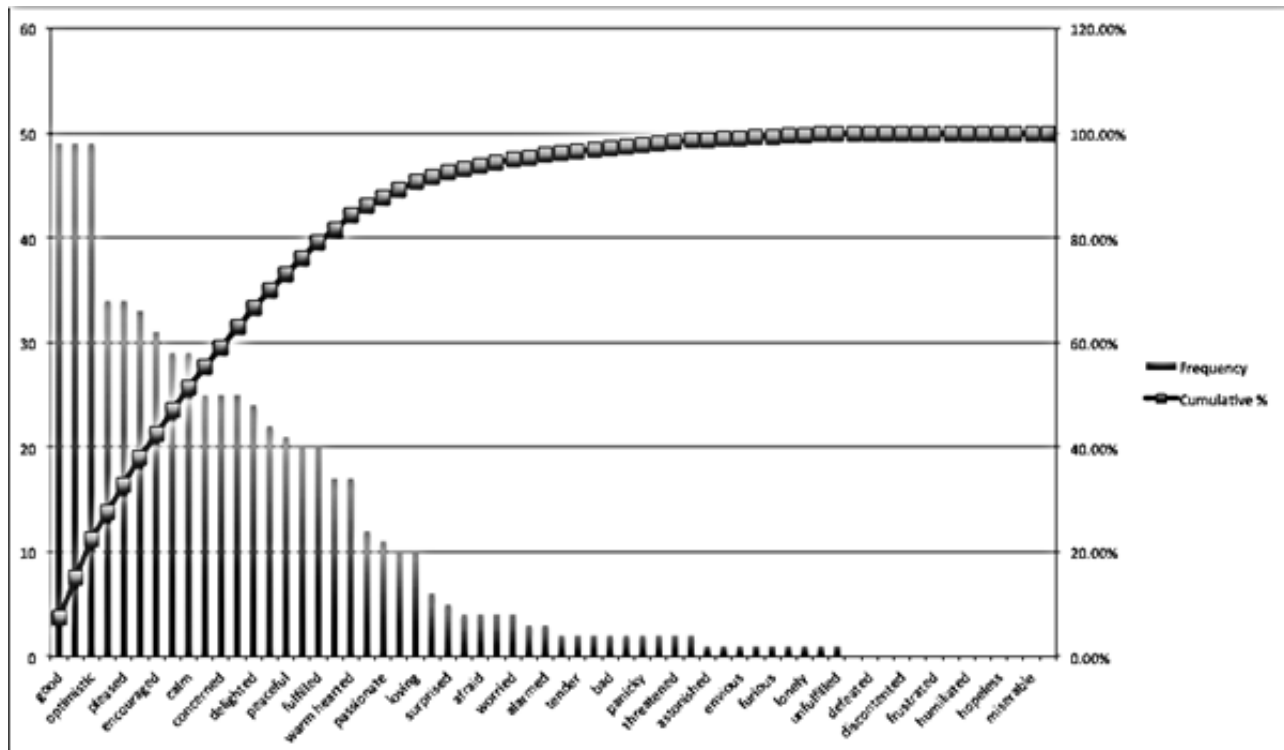


Figure 2. Pareto analysis for emotions attached to buying eco products.

It was also observed that though majority of the participants professed more positive feelings/emotions when buying an eco-product, there are still some participants who felt otherwise (i.e., negative feelings/emotions). The negative feelings/emotions felt by some participants may be due to the apprehension on the truthfulness of the product labels. Some participants also thought eco-products give them a sense of less quality than non-eco product. However, the primary reason is that eco-products are more expensive than their counterpart. As such, it is worthwhile to investigate how these two sets of feelings/emotions differ.

Kruskal-Wallis was conducted to determine the significance of the difference between the mean frequencies of emotion experienced. A non-parametric test was deemed appropriate since the data violated the assumption of equal variances thus preventing the use of t-test or ANOVA. Levene's test for equality of variances

was found to be violated at $F(1, 59) = 46.997$, $p = 0.00$.

Table 3 shows the results of the Kruskal Wallis test and it can be reported that there was a statistically significant difference between the feelings/emotions experienced in buying non-eco product ($H(1) = 38.709$, $p = 0.000$), with a mean rank of 46.59 for positive feelings/emotions and 18.24 for negative feelings/emotions. This indicates that there is enough statistical evidence to conclude that the participants experienced more positive feelings/emotions than negative feelings/emotions when buying an eco-product.

Same analysis was conducted about buying a non-eco product and Pareto analysis (see Figure 3) showed that there were 26 feeling/emotion statements that comprise the 80% of the responses. Fifty-four percent of the 26 feeling/emotion statements represents negative feelings/emotions while 12 (46%) statements denote positive feelings/emotions. The list of the 26

Table 3. Kruskal Wallis Test Between Positive and Negative Feelings/Emotions for Eco Product

Feelings/Emotions	
Chi-Square	38.709
Df	1
Asymp. Sig.	0.000

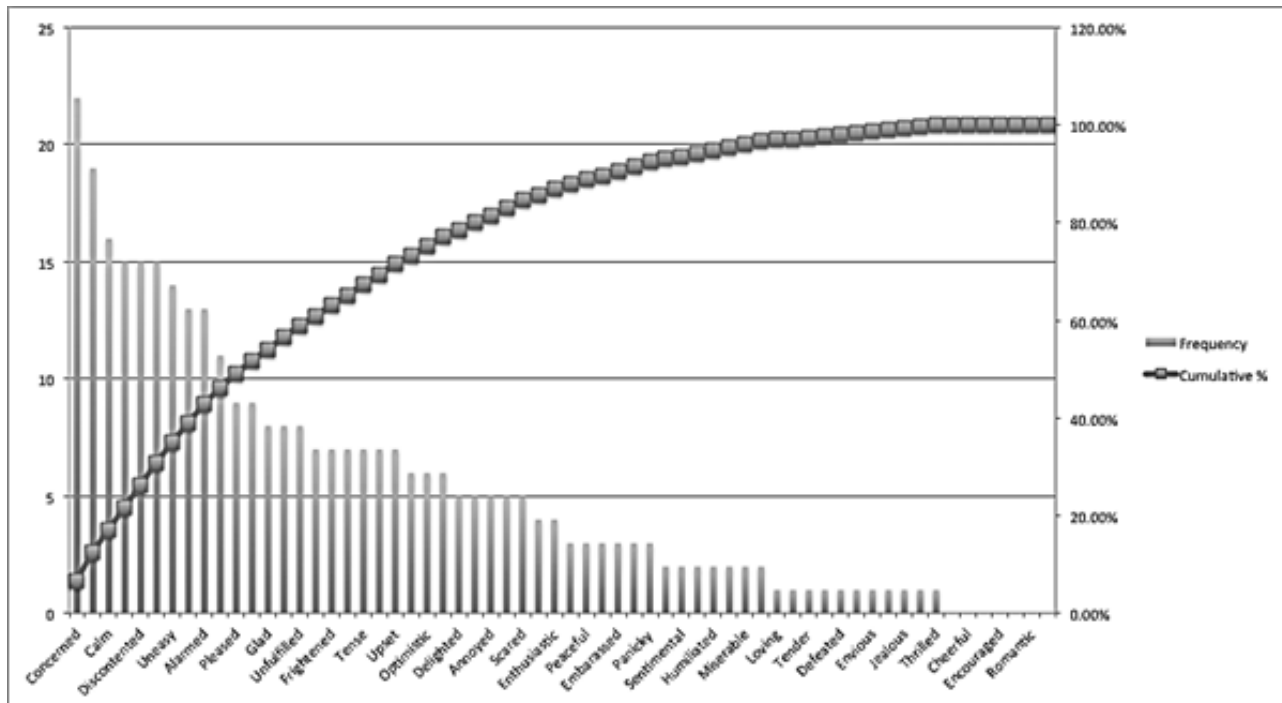


Figure 3. Pareto analysis for non-eco products.

feeling/emotion statements that were included in the top 80% is shown in Table 4.

It can be observed that the responses were divided between the positive and negative feelings/emotions and thus require to be tested whether the difference is significant or not. Independent samples t-test was conducted to determine the significance of the difference between the two set of feelings/emotions. A parametric test was deemed to be appropriate since Levene’s test for equality of variances was not violated at $F(1, 59) = 1.549, p = 0.218$.

Table 5 shows the results of the Independent Samples t-test and failed to reveal a statistically reliable difference between the mean frequency of emotional experienced ($M = 5.30, SD = 4.43$) and negative feelings/emotions ($M = 5.38, SD = 6.10$), $t(60) = 0.057, p = 0.955, \alpha = .05$ when buying non-eco products. This indicates that though it was observed that responses differ, there is still no statistical evidence to conclude that the participants experienced more positive feelings/emotions than negative feelings/emotions when buying non-eco product.

Table 4. List of Top 26 Emotions in Buying a Non-Eco Product

Statements	Frequency	Cumulative Frequency	Cumulative %
Concerned	22	22	6.65%
Good	19	41	12.39%
Calm	16	57	17.22%
Contented	15	72	21.75%
Discontented	15	87	26.28%
Worried	15	102	30.82%
Uneasy	14	116	35.05%
Happy	13	129	38.97%
Alarmed	13	142	42.90%
Afraid	11	153	46.22%
Pleased	9	162	48.94%
Ashamed	9	171	51.66%
Glad	8	179	54.08%
Bad	8	187	56.50%
Unfulfilled	8	195	58.91%
Fulfilled	7	202	61.03%
Frightened	7	209	63.14%
Irritated	7	216	65.26%
Tense	7	223	67.37%
Threatened	7	230	69.49%
Upset	7	237	71.60%
Excited	6	243	73.41%
Optimistic	6	249	75.23%
Frustrated	6	255	77.04%
Delighted	5	260	78.55%
Hopeful	5	265	80.06%

Note: Statements in bold letters denotes negative feelings

Table 5. Independent Samples T-Test Between Positive and Negative Feelings/Emotions for Non-Eco Product

T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
0.057	60	0.955	0.76	1.34	-2.61	2.76

DISCUSSION

The results of the survey revealed that 87.80% of the respondents buy eco product while 12.20% have not bought any eco-product in the past because it is more expensive than alternative products. Consumers' decisions are influenced by their attitudes and behavior. Since buying green products may be prohibitive in terms of cost, the eventual decision of a consumer to patronize even expensive products is maybe brought about by a good intention. This is the premise of the Theory of Planned Behavior (TPB) proposed by Ajzen (1988). Based on the theory, a consumer's environmental buying intention and behavior may be influenced by a number of aspects such as an individual's understanding and motivation, the capability to perform the behavior, and the opportunity to behave in an environmentally-friendly way (Olander & Thøgersen, 1995; Pieters, 1989). The motivational factors that influence behavior are its intentions. Some examples of motivational factors in buying green are: concern for the environment, or fear of disaster, or disease.

This study revealed that a different model of affect that we will call Eco Emotion Set (E²S) was able to describe the feelings of consumers when they are about to buy an eco-product. It identified the most significant feelings during the act of shopping for eco-products. Consumers acknowledged experiencing more positive emotions when buying eco-products. There were 18 emotions engendered: good, happy, optimistic, glad, pleased, hopeful, encourage, amazed, calm, caring, concerned, excited, delighted, contented, peaceful, enthusiastic, fulfilled, and compassionate. Products can evoke various emotions simultaneously according to Desmet (2003). These emotions can be related to the ideo-pleasure proposed by Tiger (1992 as cited in Jordan, 2002) that these eco-products convey the value of caring for the environment. Ecological attributes created their own emotion

set due to the fact that they thrive on altruism and care for another entity. The qualities of green products such as recycling, low pollution, and economy of resources may stimulate consumer emotions such as protective feelings towards the environment (Bei & Simpson, 1995). They found that most respondents feel that they are saving the environment when they purchase recycled products. In this study, participants also felt these emotions because they are doing their share in protecting the environment. Eco-products are made from natural ingredients or biodegradable materials. When participants were asked about their understanding of eco products, respondents believed in the following attributes: they are not harmful to the environment (17.91%); they are made from recycled material and organic ingredients without toxic pesticides and herbicides (17.66%); it is healthy for people, animal, and the environment (16.92%); address recycling, sustainable production, and reduction of energy consumption and transport (16.67%); and it reduces the impact to the environment (16.42%). Patronizing these products will improve the environment and their health since these products do not have any harmful chemicals that can contaminate the environment and affect their health. People who favor going green is an act that helps improve the environment experience positive feelings of doing good to them and for society at large.

Comparing the emotions generated to the study of Richins (1997) on CES derived from automobile, recreational, and sentimental that has generated 17 emotions, only two emotions are similar and these are optimistic and peaceful. Richins (1997) studied the nature of emotion in the consumption experience and proposed an alternative method for assessing consumption related emotions. However, the study focused on consumption experience and not necessarily on the pre-purchase situation, which is the concern of this study. On the other hand, the study of Seva et al. (2010) on pre-purchase emotion

set (PES) on clothing, electronic products, and watches created 18 emotions as well. However, comparing their emotion set with this study showed that there are 12 similarities and these are amazed, concerned, contented, delighted, encourage, enthusiastic, excited, fulfilled, glad, good, happy, and hopeful. Both of these studies have emotions that are not relevant in the pre-purchase situation for eco-products. Emotion sets generated by previous studies were too broad and have a wide context of application.

In Izard's (1977) classification and Plutchik's (1980) models, there were more negative than positive emotions. In both theories only joy is positive and the rest are either neutral or negative. In Russell's (1980) model, it was not explicitly identified which corresponds to negative or positive effect. This study produced more positive emotions than negative emotions. There is statistical evidence to conclude that participants experienced more positive feelings than negative feelings when buying an eco-product. Knowing that these products trigger positive emotions to consumer will lead them to purchase these products. A strong intense positive emotion will directly influence purchase decisions. Purchase intention represents the willingness to buy and desire to have the product. Previous studies suggest that consumers sometimes relate feelings of good conscience and feelings of responsibility for the well-being of one's family when purchasing organic food (Bahr et al., 2004; Baker, Thompson, Engelken & Huntley, 2004; Makatouni, 2002). Many studies have shown that customers are willing to pay a premium price on eco-labeled or green products (Wustenhagen, 1998; Vlosky, Ozanne, & Fontenot, 1999; Gumpper, 2000; Imkamp, 2000; Loureiro et al, 2002; Makatouni, 2002; Moon et al., 2002; Veisten, 2007; Lee, Hsu, Han, & Kim, 2010). If consumers are willing to buy these kinds of products, it will force manufacturers to comply with environmental regulations and hence protect the environment. According to James

Ludwig, director of Steelcase, companies that do not consider the environment in mind when designing products is like sleep walking and in for a rude awakening because environmental protection is now becoming the current trend in the market (Weeks, 2003).

CONCLUSION

This study focused on identifying the set of emotions engendered from eco-products in the context of pre-purchase stage. From the findings it was revealed that participants significantly experience more positive feelings/emotions than negative feelings/emotions when buying an eco-product while participants are indifferent in experiencing positive and negative feelings/emotions when buying a non-eco product. The study was able to generate 18 positive emotions when buying an eco-product and 26 emotions in buying non-eco product.

The outcome of this study may be used by manufacturing companies to enhance the environmental friendliness of their products. By showing them the emotional benefits of eco products, more of them may be seen in the market thereby improving the world environment in general.

This study will be applicable for advertisers since the emotional benefit is needed for positioning green product for personal care. This study suggests that for a green product to be successful, the emotional benefits should also be communicated to the consumers to entice them to patronize these products.

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